

REMARKS

Claims 1-61 are pending in the present application, which claims are subject to a restriction requirement. The Examiner provides that the pending claims are directed to more than one patentably distinct species. Specifically, per the Examiner, the claims are directed to the following species:

- I. Species A, which is drawn to Figures 1-3 (claims 1 to 6, 15, and 26 to 29);
- II. Species B, which is drawn to Figures 4 and 5 (claims 17, 30, 31, 43 to 47, and 59 to 61);
- III. Species C, which is drawn to Figures 6-8 and 11 (claims 1 to 6, 15, 21 to 30, 39 to 46, and 55 to 61);
- IV. Species D, which is drawn to Figures 14-16 (claims 1 to 6, 15, 21, and 26 to 29);
- V. Species E, which is drawn to Figure 17 (claims 1 to 6, 15, 18 to 21, 26 to 38, 43 to 45, 46 to 54, and 59 to 61); and
- VI. Species F, which is drawn to Figure 18 (claims 11 to 14, 30, 31, 36, 43 to 47, 52, and 59 to 61).

RESPONSE TO ELECTION OR RESTRICTION REQUIREMENT

The Applicant was requested under 35 U.S.C. §121 to elect a single disclosed species for prosecution on the merits. In this regard, the Applicant elects Group I, i.e., Figs. 1-3, and claims 1-6, 15, and 26-29 with traverse. Figs 4-18 and claims 7-14, 16-25, and 30-61 are withdrawn without prejudice.

The Examiner asserts that, species A to F are patentably distinct without any generic claim. The Applicant respectfully disagrees. Claims 1, to 6 are generic claims (linking claims) for elected species A and non-elected species B to E as will be obvious

from the following discussion. Therefore, if claims 1 to 6 are patentable, claims 7 to 14, 16 to 25, 30 to 61 in non-elected species B to E should be examined.

The Applicants respectfully maintain that, the subject matter of species A to F is mutually related in that the species all solve a common problem. Specifically, species A to F solve the problem that if recording sensitivity differs between the specified track and its adjacent tracks, the method fails and it becomes impossible to optimize the quantity of recording light and strength of a recording magnetic field. See, e.g., Specification, page 4, line 13 to page 5, line 4. The subject matter of species A to F, further, addresses a common issue, i.e., even if recording sensitivity differs between adjacent tracks, the following qualities are desirable: control the width of the recording mark to be optimum, minimize cross-talk between tracks during reproduction of a signal and cross-erase during recording of a signal, and achieve an improved level of high density track recording.

First, with respect to species A and species C to E, i.e., the subject matter of claim 1 provides that,

to determine an optimum recording condition for the track $Tr(n)$, a condition under which a sufficiently strong read-out signal is reproduced from the track $Tr(n)$ is found through detection of the amplitude $V(n)$ of the read-out signal, and a condition under which recording bits do not spill over from the track $Tr(n)$ is found through detection of the amplitude $V(n+1)$ of a signal reproduced from the track $Tr(n+1)$ which is adjacent to the track $Tr(n)$. Hence, an optimum recording condition can be found precisely even when recording sensitivity differs between the tracks $Tr(n)$ and $Tr(n+1)$ as is the case when information is recorded in both the land and the groove.

Id., page 25, line 15 to page 26, line 3. Accordingly, the Applicants respectfully maintain that species A and species C to E solve the same problem and are drawn to the same generic claim.

With respect to species B, the subject matter of claim 7 provides that,

an optimum quantity of recording light has been determined based only on the amplitude $V(n)$ of a signal reproduced from the track $Tr(n)$ when the upper limit of quantities of recording light cannot be determined based on the amplitude $V(n+1)$ of a signal reproduced from the adjacent track $Tr(n+1)$. Alternatively, without any precondition, an optimum quantity of recording light may be determined by performing a predetermined calculation on the quantity of recording light at which the amplitude $V(n)$ of a signal reproduced from the track $Tr(n)$ equals a predetermined value.... The alternative scheme takes less time to determine a recording condition.

Id., page 31, line 23 to page 33, line 3. The “predetermined calculation” here is defined as

Recording marks are written in the track $Tr(n)$ with a sufficient width using recording light having a quantity at which the amplitude is sufficiently large. However, if recording marks are written using recording light having a quantity at which the amplitude $V(n)$ takes its maximum value, the resultant recording marks may be wider than the track $Tr(n)$ and produce spillover effects to an adjacent track $Tr(n+1)$. Taking this possibility into consideration, an amplitude $A1$ that is slightly smaller than the maximum value of the amplitude $V(n)$ is designated as a threshold value, and a quantity of recording light Px at which the amplitude $V(n)$ is equal to the amplitude $A1$ is detected as the lower limit of an optimum quantity of recording light for the track $Tr(n)$. An optimum quantity of recording light Pz for the track $Tr(n)$ is determined by so summing the quantity of recording light Px and a predetermined quantity of recording light Py ($Pz = Px + Py$) that resultant recording marks will not produce spillover effects to adjacent tracks.”

Id., page 29, line 9 to page 30, line 6: Therefore, species B equally addresses the common issue of recording sensitivity difference between adjacent tracks. As a result, we believe that species B also solves the same problem as species A and species C to E.

Further, with respect to species B and with respect to species F, the subject matter of claim 11 provides that,

For the sake of cutting down on the time taken to determine a recording condition, an optimum quantity of recording light can be determined also by performing a predetermined calculation (subtraction of a predetermined value, multiplication by a predetermined multiplier, etc.) on the quantity of recording light at which the amplitude $V(n+1)$ of a signal reproduced from the track $Tr(n+1)$ equals a predetermined value.

Id., page 33, lines 3-11. The "predetermined calculation" is defined as

Spillover effects from the marks that are written in the track $Tr(n)$ to constitute a normal pattern can be estimated from the changes in the amplitude of a signal reproduced from the adjacent track $Tr(n+1)$. Therefore, an optimum quantity of recording light P_z for the track $Tr(n)$ can be determined which can write marks without producing spillover effects to the adjacent track $Tr(n+1)$, by detecting the quantity of recording light (for example, the quantity of light at which the amplitude $V(n+1)$ falls down to or below a predetermined value A_4) at which spillover effects from the marks appear and performing a calculation on the detected quantity of recording light P_x (subtraction of a predetermined quantity of recording light P_y ($= P_x - P_y$), multiplication by a predetermined multiplier, etc.

Id., page 62, lines 5-19. Accordingly, Species B and F also solve the same problem as species A and species C to E.

The above descriptions clearly mutually relate the subject matter of species A, C to E (subject matter of claim 1), the subject matter of species B (subject matter of claim 7), and the subject matter of species B and F (subject matter of claim 11) in that the subject matter of all the species is directed to addressing the common issue. Species A to F therefore share patentably common subject matter. Accordingly, the Applicant respectfully traverses the restriction requirement.

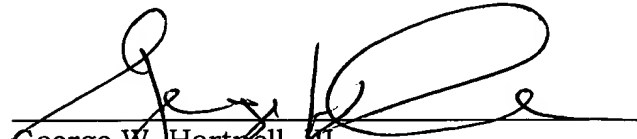
It is respectfully submitted that the subject application is in a condition for allowance. Early and favorable action is requested.

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If for any reason a fee paid is inadequate or credit is owed for any excess fee paid, you are hereby authorized and requested to charge or credit Deposit Account No. **04-1105.**

Respectfully submitted,

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